We claim:

1. A lead-free optical glass having a refractive index n_d of 1. 55 $\leq n_d \leq$ 1.60, an Abbe number ν_d of 54 $\leq \nu_d \leq$ 63 and a transformation temperature Tg $\leq$ 500 °C, said glass comprising a composition, in percent by weight, based on oxide content, of:

P_2O_5	43 - 56
ZnO	21- 36
Al_2O_3	0 – 6
Na_2O	0.5 -16
K_2O	0 - 8
ΣM_2O	$\leq$ 16
MgO	0 - 5
CaO	0 - 5
BaO	3 – 14
B_2O_3	0 - 8
La_2O_3	0 – 7.

2. The lead-free optical glass as defined in claim 1, containing from 0.5 to 7 percent by weight of said La_2O_3.

3. The lead-free optical glass as defined in claim 1, and free of arsenic.

4. The lead-free optical glass as defined in claim 1, containing, in percent by weight, as refining agent, at least one of: from 0 to 1 percent by weight, Sb_2O_3; from 0 to 1 percent by weight, SnO; from 0 to 1 percent by weight, NaCl; from 0 to 1 percent by weight, SO_4^{2-}; and from 0 to 1 percent by weight, F^-.

5. A lead-free optical glass having a refractive index n_d of $1.56 \leq n_d \leq 1.59$, an Abbe number ν_d of $55 \leq \nu_d \leq 62$ and a transformation temperature $Tg \leq 500\,^{\circ}C$, said glass comprising a composition, in percent by weight, based on oxide content, of:

P_2O_5	44 - 55
ZnO	22- 32
Al_2O_3	0 – 5
Na_2O	5 -15
K_2O	0 - 8
ΣM_2O	≤ 15
MgO	0 - 5
CaO	0 – 5
Σ MgO+CaO	≤ 8
BaO	4 – 13
B_2O_3	0 - 8
La_2O_3	0.5 – 5.

6. The lead-free optical glass as defined in claim 5, and free of arsenic.

7. The lead-free optical glass as defined in claim 5, containing, in percent by weight, as refining agent, at least one of: from 0 to 1 percent by weight, Sb_2O_3; from 0 to 1 percent by weight, SnO; from 0 to 1 percent by weight, NaCl; from 0 to 1 percent by weight, SO_4^{2-}; and from 0 to 1 percent by weight, F^-.

8. A lead-free optical glass having a refractive index n_d of $1.56 \leq n_d \leq 1.59$, an Abbe number ν_d of $55 \leq \nu_d \leq 62$ and a transformation temperature $Tg \leq 450\,^{\circ}C$, said glass comprising a composition, in percent by weight, based on oxide content, of:

P_2O_5	46 - 53
ZnO	24- 31
Al_2O_3	0 – 3
Na_2O	6 -13
K_2O	0 - 6
ΣM_2O	$\leq$ 13
MgO	0 - 4
CaO	0 – 4
Σ MgO+CaO	$\leq$ 5
BaO	4 – 11
B_2O_3	0 - 5
La_2O_3	0.5 – 4.

9. The lead-free optical glass as defined in claim 8, and free of arsenic.

10. The lead-free optical glass as defined in claim 8, containing, in percent by weight, as refining agent, at least one of: from 0 to 1 percent by weight, Sb_2O_3; from 0 to 1 percent by weight, SnO; from 0 to 1 percent by weight, NaCl; from 0 to 1 percent by weight, SO_4^{2-}; and from 0 to 1 percent by weight, F^-.

11. A lead-free optical glass having a refractive index n_d of $1.56 \leq n_d \leq 1.59$, an Abbe number ν_d of $55 \leq \nu_d \leq 62$ and a transformation temperature $Tg \leq 400\,^{\circ}C$, said glass comprising a composition, in percent by weight, based on oxide content, of:

P_2O_5	48 - 51
ZnO	25 - 29
Al_2O_3	0.5 – 2.5
Na_2O	7 - 12
K_2O	0 - 4
ΣM_2O	$\leq$ 12
MgO	0 - 3
CaO	0.5 – 3.5
Σ MgO+CaO	$\leq$ 3.5
BaO	5 – 10
La_2O_3	0.5 – 3.5.

12. The lead-free optical glass as defined in claim 11, and free of arsenic.

13. The lead-free optical glass as defined in claim 11, containing, in percent by weight, as refining agent, at least one of: from 0 to 1 percent by weight, Sb_2O_3; from 0 to 1 percent by weight, SnO; from 0 to 1 percent by weight, NaCl; from 0 to 1 percent by weight, SO_4^{2-}; and from 0 to 1 percent by weight, F^-.

14. An optical element comprising a lead-free glass as defined in claim 1.